anastomosis (ES) and a patch angioplasty (Patch). A third model required suturing around a clock-face design printed on patch material (CF). ACGME log experience was recorded. Secondary evaluations of the finished models were then performed by four blinded assessors.

Results: Inter-rater reliability among the seven assessors was high ($\alpha = .91$). Evaluations acquired by direct observation correlated well with participants' training level/experience for all three models (ES r = .85/.83, Patch r = .71/.69, CF r = .82/.84). Highest correlation with training level/experience was obtained with a combined score for each participant incorporating all observed ratings on each model (r = .90/.93). Construct validity was demonstrated by each model's ability to discern junior (Pre-MD to PGY2) from senior (PGY 3-5) trainees (ES $P < .005$, Patch $P < .05$, CF $P < .001$). Internal consistency was confirmed for each participant on all three models ($\alpha = .89$). Finished product evaluation demonstrated fair to poor correlation with training level/experience (ES r = .58/.51, Patch r = .53/.44, CF r = .24/.12).

Conclusions: These results provide construct validity for three vascular skill assessment models. Our data also demonstrates that the most accurate assessments are obtained by direct observation with trained evaluators. Validated models and experienced assessors should be considered obligatory components of a meaningful system for vascular skill testing and improvement.

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PVSS23.

Influence of CTA Reconstruction Software on Anatomic Measurements and Endograft Component Selection for Abdominal Aortic Aneurysm Repair

Matthew A. Corriere, Arsalla Islam, Timothy E. Craven, Thomas Conlee, Justin Hurie, Matthew Edwards. Wake Forest University School of Medicine, North Carolina, NC

Objectives: Although multiple software programs are available for three dimensional centerline computed tomography angiography reconstruction (3D-CTA), software availability varies and measurement reliability between programs is unknown. We compared measurements from 3D-CTA reconstructions created with three commercially available programs (AquariusNet, Preview, and Osirix) and characterized agreement for endograft component selection for endovascular abdominal aortic aneurysm repair (EVAR).

Methods: Axial images from 60 CTAs performed before EVAR were reconstructed and measured with each program. Diameters were measured from outer wall to outer wall at sites of planned graft fixation. Lengths were measured from the lowest renal artery to aortic bifurcation and bilateral hypogastric arteries. Agreement was evaluated using plots, intra-class correlation, and repeated measures ANOVA. Diameter-based graft component selection agreement based on instructions for use was assessed with weighted kappa statistics.

Results: Mean differences in diameter ranged from 0.18-0.75 mm for aortic and 0.09-0.73 mm for iliac measurements. Mean differences in centerline length from the lowest renal to hypogastric artery ranged from 3.94-8.55 mm on the right and 2.86-8.23 mm on the left. Intra-class correlation estimates for aortic diameter, common iliac artery diameter, and centerline distances were ≥ 0.77 for all pair-wise comparisons. Programs also demonstrated similar pair-wise agreement for diameter-based endograft component selection.

Conclusions: Although differences in mean diameter and centerline length measurements were identified between programs, these differences were small and of unclear clinical significance to EVAR planning. Agreement between measurements and diameter-based endograft component selection are generally similar between programs. Software selection for 3D-CTA reconstruction should be primarily based on cost, availability, and operator preference.

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PVSS24.

Factors Affecting Inferior Vena Cava Filter (IVCF) Retrieval Success

Roan J. Glocker, Zdenek Novak, Thomas C. Matthews, Mark A. Patterson, William D. Jordan, Marc A. Passman. Vascular Surgery, UAB, Birmingham, Ala

Objectives: Success rates vary for the retrieval of IVCF. Optimal retrieval time and factors influencing success remain unproven. This study aims to evaluate factors related to successful IVCF retrieval.

Methods: An institutional prospectively maintained database was reviewed for all IVCF retrieval attempts 2007-12. Patient demographics, comorbidities, indications for procedure, placement technique, IVCF type, presence of angulation, and time to retrieval were evaluated. Statistical analyses performed using SPSS (IBM).

Results: Of 121 attempted IVCF retrievals, 92 (76%) were successful. There were no significant differences between the successful and unsuccessful attempts in terms of patient demographics, comorbidities, indications for procedure, placement technique, or IVCF type. Time since IVCF placement was significantly different ($P = .025$) between the successful and unsuccessful retrieval groups, medians were 105 (7-368) and 162 (43-379) days respectively. Time since IVCF placement greater than 117 days correlated significantly with unsuccessful IVCF retrieval (R = .218 $P = .017$, OR = 2.88 $P = .02$). Angulation greater than 20 degrees on AP radiograph was noted in 7 of 29 (24%) unsuccessful retrievals compared with 7 of 92 (7.6%) successful retrievals, this difference was significant ($P = .015$).